Appl. No. 10/004,131
Amdt. sent July 7, 2005
Amendment under 37 CFR 1.116 Expedited Procedure
Examining Group 2182

PATENT

REMARKS/ARGUMENTS

Claims 6, 8, and 11-15 are pending.

Claims 6-12 and 14-16 are rejected under 35 U.S.C. § 102(e) as being anticipated by Schubert et al., U.S. Patent No. 6,460,113.

Claim 13 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Schubert '113 in view of Schubert et al., U.S. Patent No. 6,742,034.

Claim 6 has been amended to incorporate the subject matter recited in claims 7, 9, and 10, and for the reasons set forth below is believed to overcome the cited art. Claims 7, 9, and 10 have been canceled. The remaining dependent claims have been amended accordingly.

In accordance with the present invention as recited in claim 6, a storage system includes a connection unit connected between plural disk drive units and plural controllers, the plural controllers each in communication with at least one computer. One of the controllers is a disk controller that incorporates a block I/O interface for access by a computer, and another controller is a file server that uses a file I/O interface for access by a computer.

Referring to Fig. 2 of Schubert '113, the examiner asserts that their storage pool (52) reads on the recited plural disk units, that their servers (38, 40) read on the recited plural controllers, that their clients (34) read on the recited computer, and that their switch (48) reads on the recited connection unit. Given this interpretation of Schubert '113 by the examiner, the cited reference does not show that one of the controllers is a disk controller in communication with a computer via a block I/O interface and another controller is a file server in communication with a computer via a file I/O interface. Instead, Schubert '113 clearly show in Fig. 2 that the clients (34) are connected to a network (32) that can include "a WAN, a LAN, or other type of computer network." *Col. 3, lines 61-63*. It is understood by those of ordinary skill that WANs and LANs are file I/O interfaces. Fig. 2 therefore does not show that one of the controllers is a disk controller in communication with a computer via a block I/O interface, since the servers (38) and (40) only provide file I/O interfaces to the clients (34).

Fig. 1 of Schubert '113 also discloses that in a shared storage network (10), clients (11) are connected to a network 12 (*col. 2, lines 65-66*), that the clients (11) use a variety

of network protocols to transfer data which are conventionally known, such as TCP/IP (*col. 3, lines 6-8*), and that the network (12) can be a WAN or LAN (*col. 3, lines 2-4*). It is believed that due to a typographical error in Schubert '113, the clients are identified in the text by reference numeral 10, when in fact the reference numeral should be "11". It is understood by those of ordinary skill that WANs and LANs are file I/O interfaces. Schubert '113 further disclose that the shared storage network (10) of Fig. 1 includes a SAN (14) connected to the network (32). The SAN uses Fibre Channel interconnections (15) for access to the storage pool (18). It is understood that Fibre Channel is a block I/O interface. However, Fig. 1 clearly shows that the Fibre Channel interconnections (15) are not connected to the clients (11). Therefore, Fig. 1 does not show that one of the controllers is a disk controller in communication with a computer via a block I/O interface.

Respectfully, Schubert '113 do not read on the invention as recited in claim 6, and so the Section 102 rejection is believed to be overcome.

Claim 6 further recites that some of the disk drive units hold information that is used by the controllers to determine which disk drive units can be accessed by the controllers. A review of the portion of Schubert '113 cited by the examiner on this point (col. 4, lines 26-40) reveals a discussion of the storage of data into the storage pool (52). There does not appear to be any discussion that the storage pool contains information as to allow a controller to determined which disk drive unit(s) it can access. Respectfully, Schubert '113 do not read on this aspect of the invention as recited in claim 6, and so the Section 102 rejection is believed to be overcome.

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CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,

George B. F. Yee
Reg. No. 37,478

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, Eighth Floor
San Francisco, California 94111-3834
Tel: 650-326-2400
Fax: 415-576-0300
GBFY:cmm
60440368 v1